

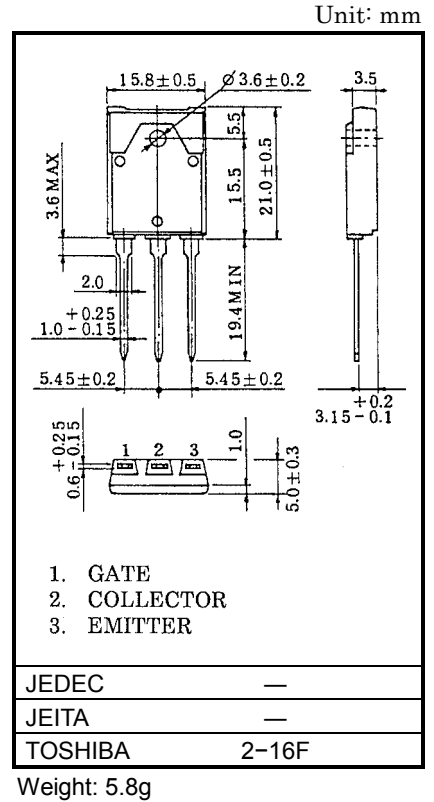
# GT40M101

## HIGH POWER SWITCHING APPLICATIONS

- High Input Impedance
- High Speed :  $t_f = 0.4\mu\text{s}$  (Max.)
- Low Saturation Voltage :  $V_{CE(sat)} = 3.4\text{V}$  (Max.)
- Enhancement-Mode

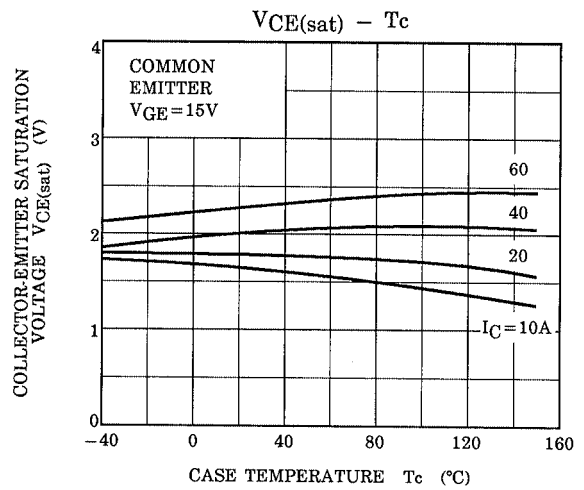
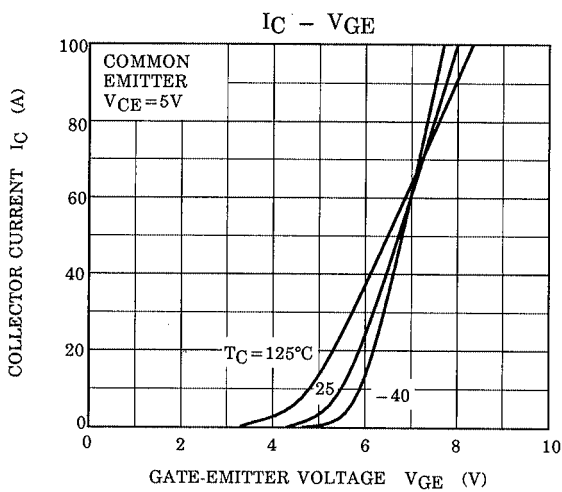
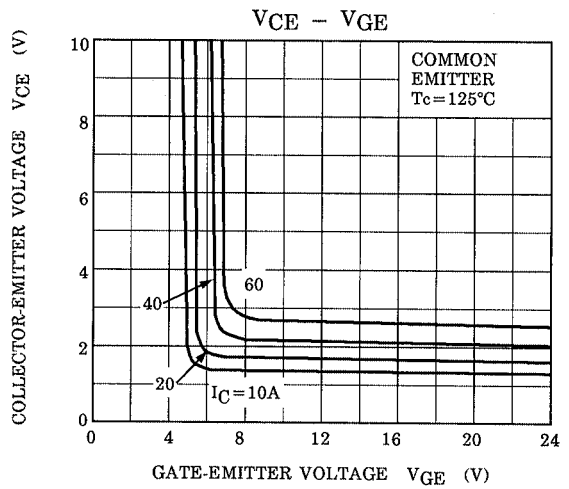
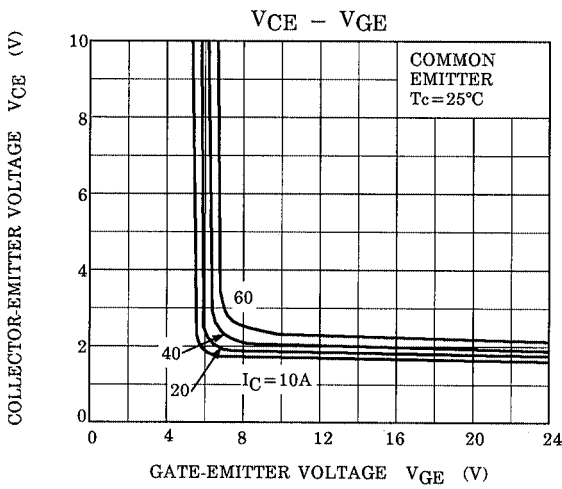
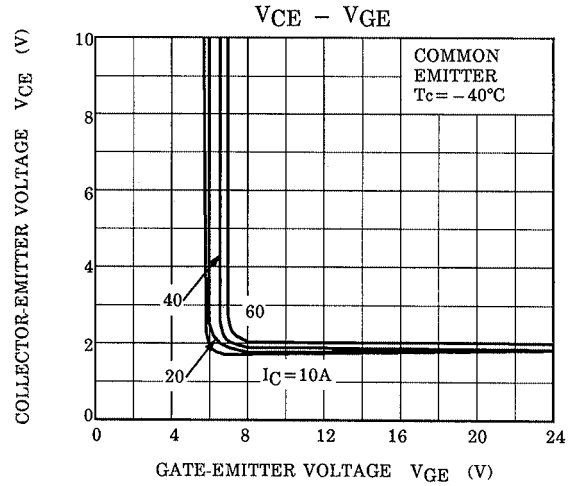
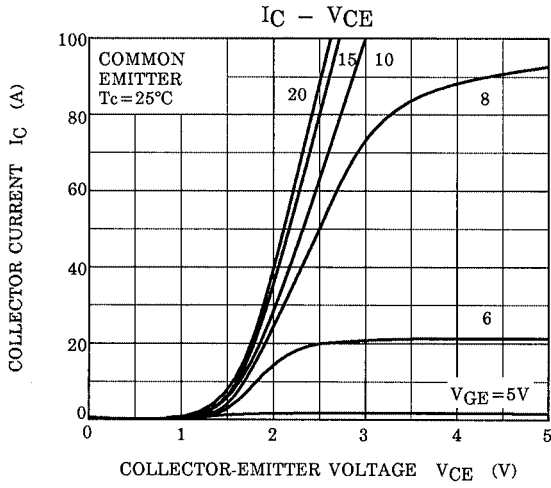
## MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )

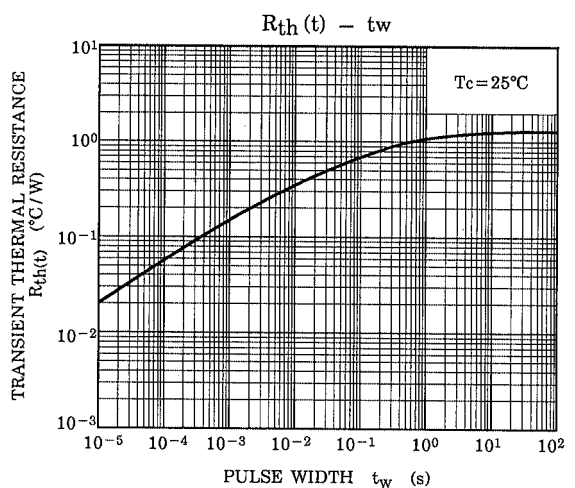
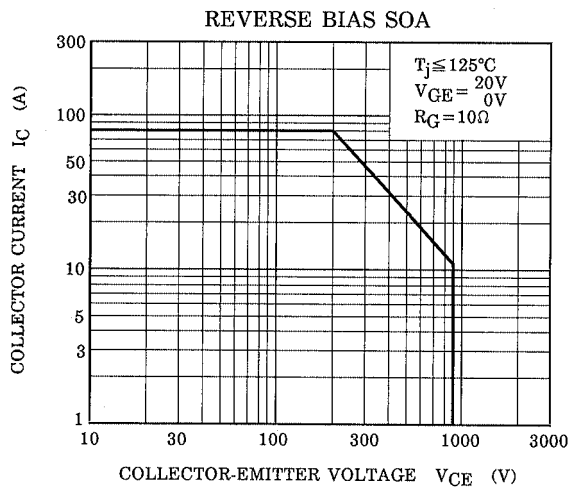
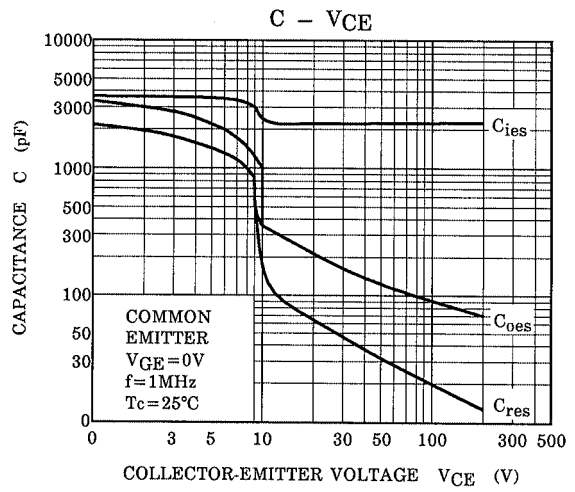
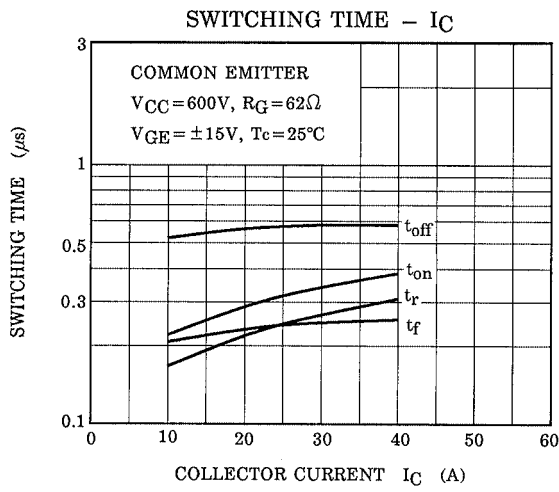
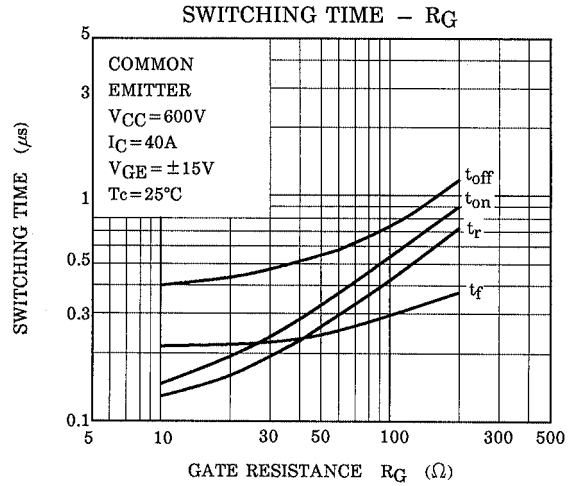
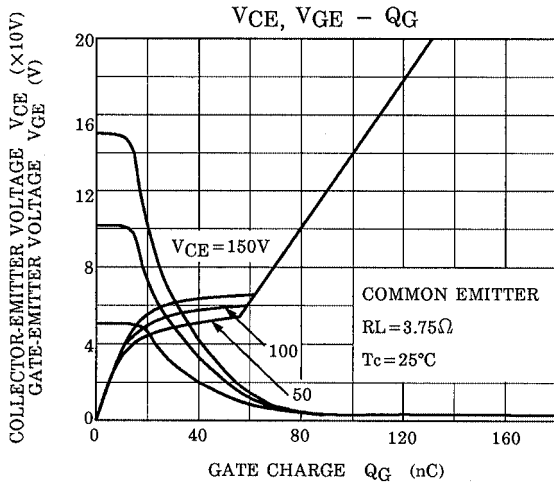
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Emitter Voltage		$V_{CES}$	900	V
Gate-Emitter Voltage		$V_{GES}$	$\pm 25$	V
Collector Current	DC	$I_C$	40	A
	1ms	$I_{CP}$	80	
Collector Power Dissipation ( $T_c = 25^\circ\text{C}$ )		$P_C$	90	W
Junction Temperature		$T_j$	150	$^\circ\text{C}$
Storage Temperature Range		$T_{stg}$	-55~150	$^\circ\text{C}$
Screw Torque		—	0.8	N·m

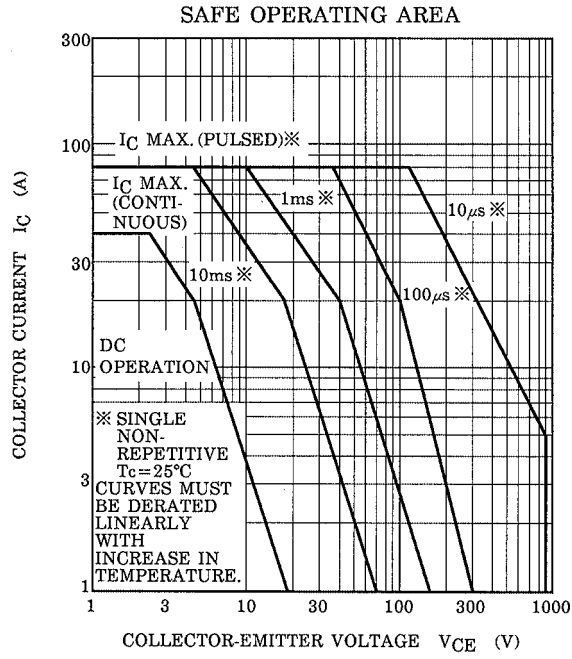


## ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Gate Leakage Current		$I_{GES}$	$V_{GE} = \pm 25\text{V}, V_{CE} = 0$	—	—	$\pm 500$	nA
Collector Cut-off Current		$I_{CES}$	$V_{CE} = 900\text{V}, V_{GE} = 0$	—	—	1.0	mA
Gate-Emitter Cut-off Voltage		$V_{GE(OFF)}$	$I_C = 40\text{mA}, V_{CE} = 5\text{V}$	3.0	—	6.0	V
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C = 40\text{A}, V_{GE} = 15\text{V}$	—	2.1	3.4	V
Input Capacitance		$C_{ies}$	$V_{CE} = 30\text{V}, V_{GE} = 0, f = 1\text{MHz}$	—	2100	—	pF
Switching Time	Rise Time	$t_r$		—	0.30	—	$\mu\text{s}$
	Turn-On Time	$t_{on}$		—	0.40	—	
	Fall Time	$t_f$		—	0.25	0.40	
	Turn-Off Time	$t_{off}$		—	0.60	—	
Thermal Resistance		$R_{th(j-c)}$	—	—	—	1.39	$^\circ\text{C}/\text{W}$







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